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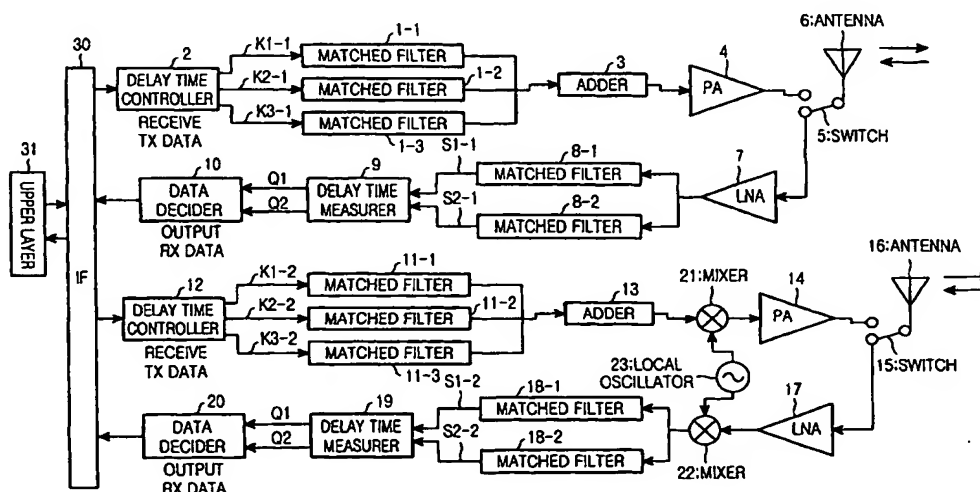
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(54) Title: ULTRA WIDEBAND RADIO TRANSMITTER, ULTRA WIDEBAND RADIO RECEIVER, AND ULTRA WIDEBAND RADIO COMMUNICATION METHOD



(57) Abstract: Disclosed are ultra wideband radio transmitter, ultra wideband radio receiver, and ultra wideband radio communication method capable of securing higher transfer rate and communication quality than conventional ones while avoiding a band where communication signals are concentrated, and capable of miniaturizing an antenna. In a transmitter, a delay time controller (12) outputs a periodic pulse to matched filters 11-1 and 11-2 when transmission data is 1, and outputs the periodic pulse to matched filters 11-1 and 11-3 when the transmission data is 0. The matched filter 11-1 outputs reference signal, the matched filter 11-2 outputs first data signal ahead of the reference signal, and the matched filter 11-3 outputs second data signal behind the reference signal. An adder (13) adds up these, a mixer (21) frequency-converts output of the adder using a local signal received from a local oscillator (23), and an antenna (6) radiates output of the mixer (21).